



Purpose: It is the intention of this Administrative-Master Syllabus to provide a general description of the course, outline the required elements of the course and to lay the foundation for course assessment for the improvement of student learning, as specified by the faculty of Wharton County Junior College, regardless of who teaches the course, the timeframe by which it is instructed, or the instructional method by which the course is delivered. It is not intended to restrict the manner by which an individual faculty member teaches the course but to be an administrative tool to aid in the improvement of instruction.

Course Title – Introduction to Pipe Welding

Course Prefix and Number – WLDG 1435

Department – Welding Technology

Division – Workforce Dev

Course Type: (check one)

- Academic General Education Course (from ACGM – but not in WCJC Core)
- Academic WCJC Core Course
- WECM course (This course is a Special Topics or Unique Needs Course: Y or N)

Semester Credit Hours # : Lecture hours# : Lab/other hours # 4:3:4

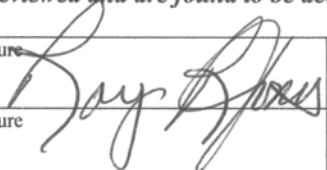
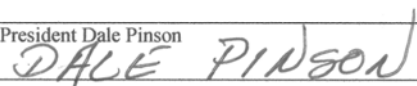
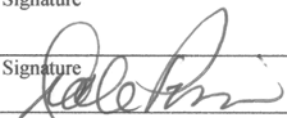
Equated Pay hours for course - 5

Course Catalog Description – An introduction to welding of pipe using the shielded metal arc welding process (SMAW), including electrode selection, equipment setup, and safe shop practices. Emphasis on weld positions 1G and 2G using various electrodes.

List Lab/ Other Hours
Lab Hours 4
Clinical Hours
Practicum Hours
Other (list)

Prerequisites/Corequisites - WLDG 1428 or welding department chair approval.

Approvals – the contents of this document have been reviewed and are found to be accurate.

Prepared by Roy Jones	Signature 	Date 10/2/08
Department Head	Signature	Date
Division Chair	Signature	Date
Vice President Dale Pinson 	Signature 	Date 10-14-08



I. Topical Outline – Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, clinical or other non lecture instruction):

- Week 1: First day handout and orientation
- Week 2: Module 29101-03, Welding Safety and Exam
- Week 3: Module 29111-03, SMAW - Open - Root Pipe Welds
 - A. Theory
 - B. Tacking
 - C. Passes
 - D. Positions
- Week 4: Exam, Module 29111-03
- Week 5 & 6: Module 29201-03 Welding Symbols
 - A. AWS Standard A2.4
 - B. Parts of the welding symbols
- Week 7 & 8: Module 29201-03 Welding Symbols (Continued)
 - A. Fillet and groove symbols
 - B. NDE Symbols
 - C. Reading weld symbols
- Week 9: Examination; Begin Module 29201-03
- Week 10: Handout, Material Data Safety Sheet (MSDS)
- Week 11: Using a word processor; Review
- Week 12: Module 29204-03, Air Carbon Arc Cutting and Gouging
 - A. Electrode selection
 - B. Storage
 - C. Dismantling
- Week 13 & 14: Module 29204-03 Air Carbon Arc Cutting and Gouging (Continued)
 - A. Equipment set-up
 - B. Washing
 - C. Preparation
 - D. Gouging
- Week 15: Review for Final Examination
- Week 16: Final Examination; Module 29204-03

II. Course Learning Outcomes

Course Learning Outcome	Method of Assessment
<p>Upon successful completion of WLDG 1435, the student will be able to:</p> <ol style="list-style-type: none"> 1. Explain shop safety rules, safety rules for tools and equipment, and personal safety rules. *5,6 2. Explain the importance of a Material Safety Data Sheet (MSDS). *5,6 3. Describe equipment and required pipe preparation. *5,6 4. Perform 1G and 2G welds using various electrodes. *5,6 5. Demonstrate how to write a report using a word processor, saving it to a disk, and printing a final copy. *5,6 <p>The Welding Technology Department does not guarantee that each student will acquire and retain each of the Student Learning Outcomes as listed above.</p>	<p>The student learning activities are designed to lead the student to the successful acquisition of the student leaning outcomes. The student will be expected to:</p> <ol style="list-style-type: none"> 1. Obtain score of 70 or above on written examinations. 2. Obtain score of 70 or above on safety tests. 3. Obtain score of 70 or above on skills examinations, including: cutting, grinding and placing in position.

III. Required Text(s), Optional Text(s) and/or Materials to be Supplied by Student.

Modern Welding Technology

IV. Suggested Course Maximum – The maximum number of students for WLDG 1435 is 15 students.

V. List any specific spatial or physical requirements beyond a typical classroom required to teach the course.

Standard Welding Equipment and Supplies

VI. Course Requirements/Grading System – Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course

Department Assignments: 30%

Laboratory Assignments: 50%

Final Exam: 20%

100-90 = A

89-80 = B

79-70 = C

69-60 = D

Below 60 = F

VII. Curriculum Checklist

- **Academic General Education Course** (from ACGM – but not in WCJC Core)
No additional documentation needed

- **Academic WCJC Core Course**
Attach the Core Curriculum Checklist, including the following:

- Basic Intellectual Competencies
- Perspectives
- Exemplary Educational Objectives

- **WECM Courses**
Attach the following:

- Program SCANS Matrix
- Course SCANS Competencies Checklist



Course Prefix & Number: WLDG 1435	
SCANS COMPETENCIES FOR THIS COURSE	
Competency	Method of Assessment
1 READING: Locate, understand, and interpret written information in prose and in documents such as manuals, graphs, and schedules.	
2 WRITING: Communicate thoughts, ideas, information, and messages in writing, and create documents such as letters, directions, manuals, reports, graphs, and flow charts.	
3 ARITHMETIC OR MATHEMATICS: Perform basic computations and approach practical problems by choosing appropriately from a variety of mathematical techniques.	
4 SPEAKING AND LISTENING: Organize ideas and communicate orally; receive, attend to, interpret, and respond to verbal messages and other cues.	
5 THINKING SKILLS: A worker must think creatively, make decisions, solve problems, visualize, know how to learn, and reason effectively.	Student Performance Test
6 PERSON QUALITIES: A worker must display responsibility, self-esteem, sociability, self-management, integrity, and honesty.	
7 WORKPLACE COMPETENCIES: resources; interpersonal skills; information; systems; and technology	Student Performance Test
8 BASIC USE OF COMPUTERS	

SCANS Matrix

Program: Welding Technology CIP: 48.0508									
LIST ALL COURSES REQUIRED AND IDENTIFIED COMPETENCIES									
Competencies								Course Number	Course Title
1	2	3	4	5	6	7	8		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	WLDG 1428	Introduction to Shielded Metal Arc Welding
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	WLDG 1417	Introduction to Layout and Fabrication
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	WLDG 1413	Introduction to Blueprint Reading
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	WLDG 1434	Introduction to Gas Tungsten Arc (TIG) Welding
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	WLDG 1457	Advanced Shielded Metal Arc Welding (SMAW)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	WLDG 1435	Introduction to Pipe Welding
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	WLDG 2380	Cooperative Education
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	WLDG 2453	Advanced Pipe Welding
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	WLDG 2447	Advanced Gas Metal Arc Welding
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	WLDG 2451	Advanced Gas Tungsten Arc Welding
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
								COMPETENCY REFERENCES	
								8 Basic use of computers	
								7 Workplace Competencies: resources; interpersonal skills; information; systems; and technology.	
								6 Personal Qualities: A worker must display responsibility, self-esteem, sociability, self-management, integrity, and honesty.	
								5 Thinking Skills: A worker must think creatively, make decisions, solve problems, visualize, know how to learn, and reason effectively.	
								4 Speaking and Listening: Organize ideas and communicate orally; receive, attend to, interpret, and respond to verbal messages and other cues.	
								3 Arithmetic or Mathematics: Perform basic computations and approach practical problems by choosing appropriately from a variety of mathematical techniques.	
								2 Writing: Communicate thoughts, ideas, information, and messages in writing, and create documents such as letters, directions, manuals, reports, graphs, and flow charts.	
								1 Reading: Locate, understand, and interpret written information in prose and in documents such as manuals, graphs, and schedules.	